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CONTINUATION SCHOOL BUILDINGS IN GERMANY AND AUSTRIA.

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(Continued from page 500.)

My last example of a new Trade Continuation School is the largest in Europe and may reasonably be regarded as a marvellous building. The Central Trade Continuation School at Vienna (see Figs. 32, 33, 34, and 35) has been illustrated in more than one Austrian periodical, and a plate of the exterior forms the frontispiece to Messrs. Best & Ogden's "The Problem of the Continuation School" [P. S. King, London, 1914: price 1s. nett]. It was erected in 1909-11 from the designs of Herr Rudolf Hammel, himself a Trade-School Master. The cost of the building only was £160,000, of the equipment £25,000, and the architect's fees amounted to £2,500, making a total expenditure of £187,500. The site was originally occupied by a district abattoir, has an area of 11,500 square yards, and an estimated value of £35,000. Every inch of the site is covered with buildings. The north and south frontages are each 420 feet long, the east 259 feet, and the west 239 feet. The position is not particularly central, nor particularly well served by trams and trains, but it adjoins a station on the Girdle Railway, and the main east-and-west thoroughfare passes within a few minutes' walk, with many lines of trams. Considering the area required, this is perhaps as central a site as could be found. The neighbourhood is somewhat dingy, but is being improved, and a magnificent new fire-station has just been erected on an adjoining site. The flattering view of the exterior (Fig. 32) is taken from a little public garden outside the Girdle station and bordering on the Canal. Six storeys are fully utilised (including the basement), and the seventh, in the roof, is partly occupied, though a portion of the roof is flat and is used as a roof-garden or promenade.

The whole block accommodates 5,200 students simultaneously, but this figure assumes that the assembly hall, recreation-rooms, baths, libraries, &c., are all occupied at once, a very unlikely state of affairs. The whole building is occupied by Compulsory Continuation scholars, except a portion of the west end, where there is a Women's Industrial School with 576 students. Of some 9,000 Continuation scholars whose names are now on the books only 32 are girls, employed in hairdressing and other skilled trades. The last report on the Continuation Schools of the city gives the total number of scholars as 54,919, of whom 9,543 are girls. Of this number 38,052 boys and 9,149 girls are engaged in skilled trades, so that only about a fifth are housed in the new school. The remainder are taught at a great number of district centres, and the tailors have a special school of their own.

The accommodation of the new Central School is as follows:

Basement quadrangles.—Two large workshops for the metal trades, 1 for joiners, 1 workshop each for smiths, blacksmiths, carriage-builders, furniture-makers, grinders, watchmakers; a laboratory for electricians; 16 smaller rooms for teachers, storage of material, etc., making 25 rooms in all.

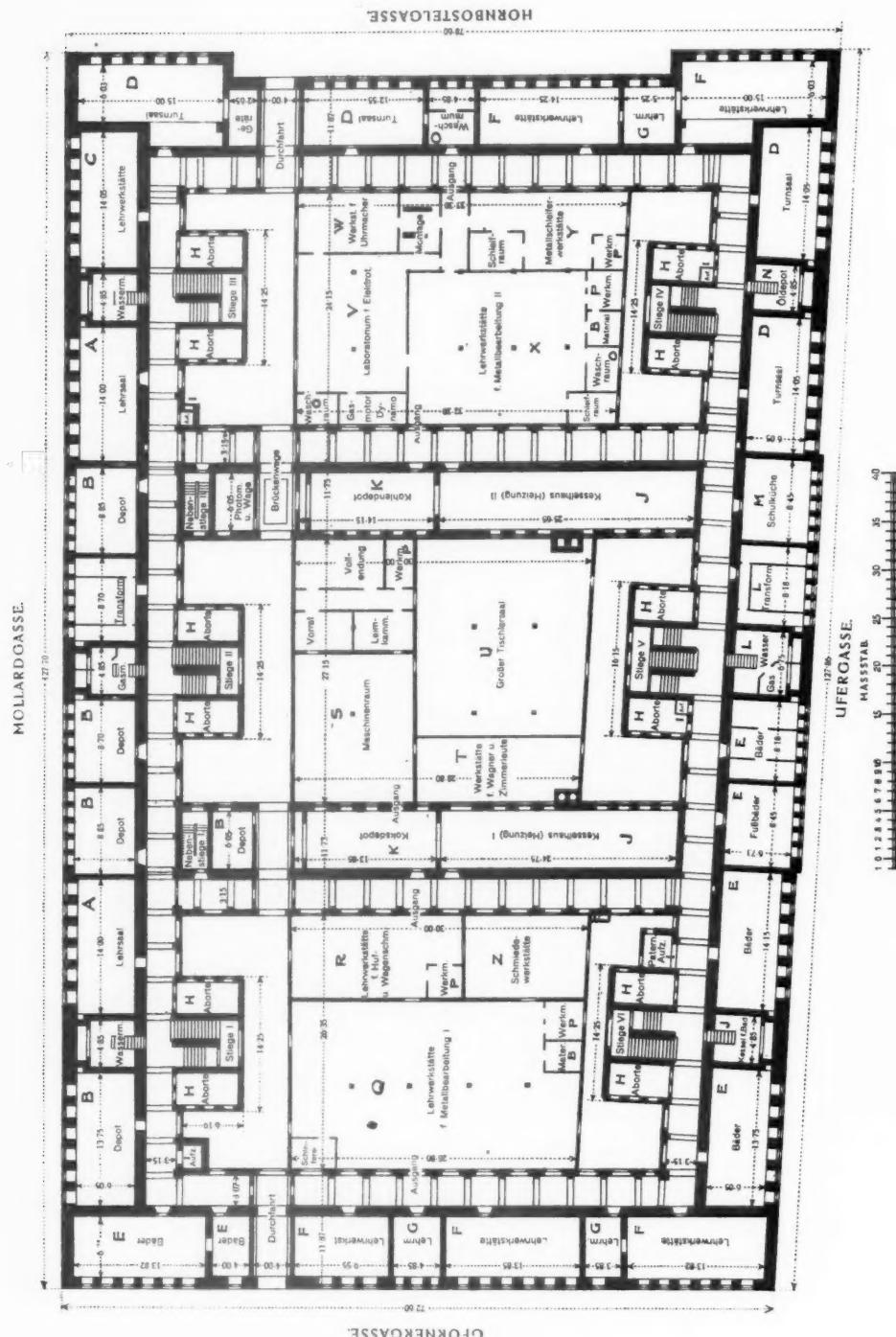


Fig. 33. CENTRAL TRADE CONTINUATION SCHOOL, VIENNA: BASEMENT PLAN.
 A. Classroom. B. Store. C. Workshop. D. Gymnasium. E. Bath. F. Workshop. G. Teacher's Room. H. Laboratories. I. Lift. J. Boiler house. K. Fuel. L. Gas, Water, and Electric Light Plan. M. School Kitchen. N. Oil Store. O. Wash-house. P. Instructor's Room. Q. Metal Workshop. R. Shoeing Smiths' Workshop. S. Machine Room. T. Carriage Workshop. U. Smiths' Workshop. V. Electrical Workshop. W. Smiths' Workshop. X. Metal Workshop. Y. Grindes' Workshop. Z. Smiths' Workshop.

(A reference to the plan will show that the building is planned round three quadrangles [Fig. 33], the floors of which are utilised for the large workshops, etc., above mentioned, all of which are top-lit.)

Basement proper.—3 workshops for printers, 1 each for confectioners and glaziers, class room for joint use of glaziers, stucco-workers and gilders, 1 drawing classroom for joint use of last two trades, and 1 room for modelling. Also 5 rooms containing baths, 4 gymnasiums, telephone exchange, kitchen, and a large number of store-rooms ; together with the heating, ventilating and electric plant ; making 42 rooms in all.

Ground floor.—15 administrative rooms, 3 libraries, 2 large exhibition rooms, 1 refreshment-room for Scholars' Association gatherings, 18 rooms for caretakers and cleaners, 1 drawing-classroom

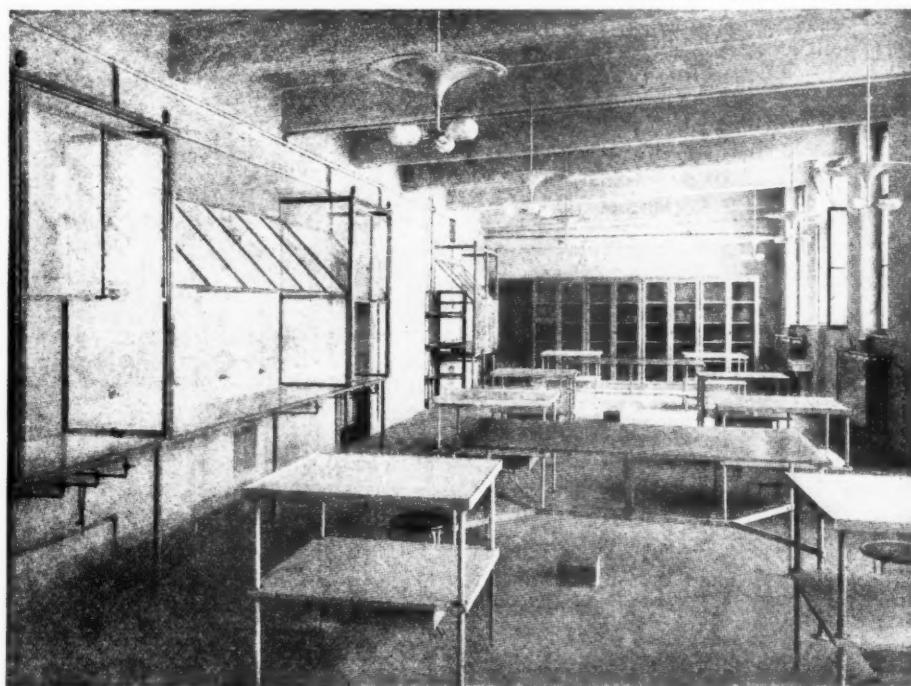


FIG. 34. TRADE CONTINUATION SCHOOL, VIENNA : GENERAL CHEMICAL LABORATORY.

and 1 workshop for bookbinders ; together with 8 rooms for the Women's Industrial School ; making (with minor rooms) 52 rooms in all.

First floor.—1 drawing-classroom and 2 lecture-rooms for " fine mechanics " ; 2 drawing-classrooms and 5 lecture-rooms for blacksmiths ; 8 drawing-classrooms and 1 science-classroom for mechanics ; 2 classrooms for brushmakers ; lecture-room for motor engineers ; various small rooms for teachers and apparatus ; also 9 rooms for the Women's Industrial School ; making 49 rooms in all.

Second floor.—8 drawing-classrooms and 6 lecture-rooms for joiners ; 2 drawing-classrooms and 3 lecture-rooms for carriage-builders ; 2 drawing-classrooms and 4 lecture-rooms for glaziers ; 1 lecture-room and 1 classroom for comb-makers and fan-makers ; various small rooms for teachers and materials ; also 9 rooms for the Women's Industrial School ; making 49 rooms in all.

Third floor.—7 drawing-classrooms and 1 lecture-room for mechanics, 3 drawing-classrooms and

6 lecture-rooms for electrical workers; 1 drawing-classroom and 2 lecture-rooms for piano and organ makers; 1 drawing-classroom and 5 lecture-rooms for grinders; also savings bank for scholars; various small rooms for teachers and materials, together with 9 rooms for the Women's Industrial School; making 49 rooms in all.

Fourth floor.—3 drawing-classrooms and 1 lecture-room for watchmakers; 5 drawing-classrooms for furniture makers and decorators; 3 drawing-classrooms and 4 studios for painters, grainers, and varnishers; laboratories for chemistry and physics, with the usual subsidiary rooms; classroom for chemistry; 2 general laboratories; and 2 recreation rooms; together with small rooms for teachers and materials; making 54 rooms in all.



FIG. 35. TRADE CONTINUATION SCHOOL, VIENNA: WORKSHOP FOR METAL TRADES.

Roof, or fifth floor.—Rooms and greenhouses for the gardeners' classes; studio, laboratory, and dark-room for the photographers' classes; greenhouse and winter-garden for the Scholars' Association; making 21 rooms in all.

There are thus in the whole building 341 rooms, of which 37 are used by the Women's Industrial School.

The rooms in this school are unsurpassed, whether in planning, lighting, or equipment, by any others I have seen. Their disposition is simple and straightforward. Except in the suite devoted to the gatherings of the Scholars' Association, there is a complete absence of decoration. Externally a similar austerity is to be seen, the elevations being treated in a dingy grey rough-cast, with practically no relief, and the mansard roof covered with dark red tiles.

Having briefly traced the evolution of an elaborately equipped Trade Continuation School from the simplest beginnings, it still remains to mention other expedients by which a small district Trade School may be contrived in a larger block of educational buildings devoted to more general purposes. Various experiments have been tried in Munich, and of these four at least are worthy of notice. I have already remarked that a system of scattered district schools finds favour with the authorities in preference to a great central institution.

A good example is to be seen in the "Gartenbau" (garden-building) at the rear of the Luisenstrasse girls' school. (See fig. 36). Here a small and entirely self-contained Continuation School has been

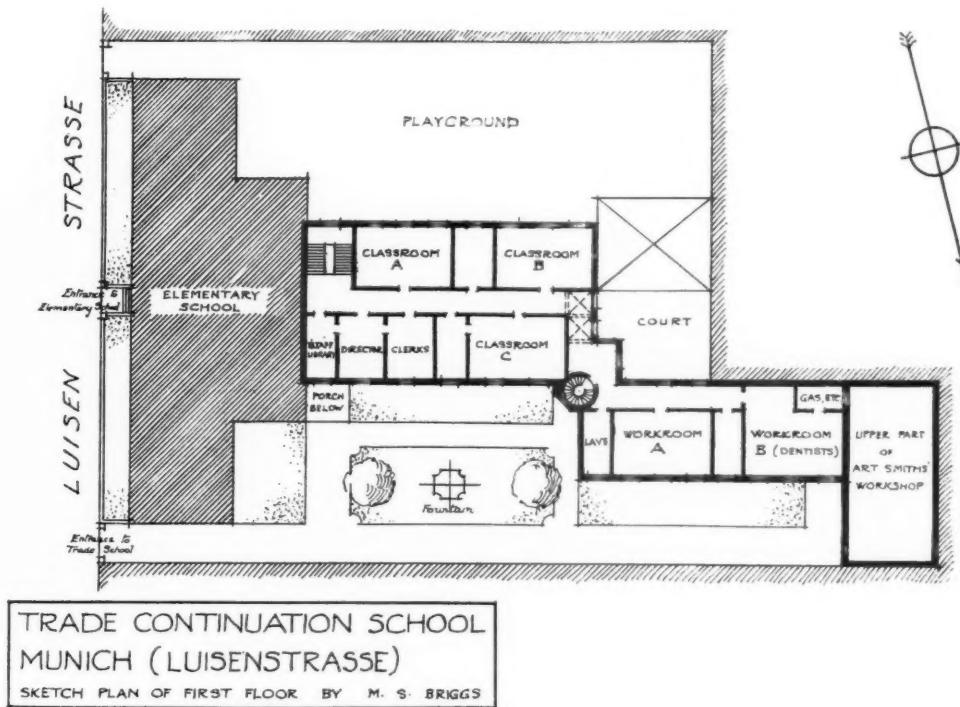


FIG. 36.

planned with an excellent north light to the majority of the rooms. The cost was £24,000, and the building was erected in 1899-1900 from the designs of Professor Theodor Fischer. At the present time there are about 1,650 names on the books, of whom nearly 1,000 are Compulsory Continuation scholars, about half the remainder being voluntary day scholars, and the other half voluntary evening scholars of an advanced type. The Continuation trades taught in this school comprise bricklayers, masons, carpenters, plasterers, sculptors, dental mechanics, bakers, jewellers, gold and silver smiths. In the basement, besides heating apparatus, etc., are 5 large workrooms for bricklayers, masons, carpenters, staircase-makers and plasterers respectively. On the ground floor, besides apartments for the caretaker, and various small rooms for teachers, are a studio for sculptors, a drawing-classroom for engineers, a room for art metalwork, and 1 other studio. On the first floor (see plan) classrooms "A"

and "B" are used jointly by jewellers and dentists, classroom "C" is used by joiners, workroom "B" is used for dentists' practical mechanical work and has a small room containing anæsthetic apparatus. There are also sundry rooms for administration and teachers as shown. On the second floor are 5 classrooms and 5 small teachers' rooms; on the third floor 4 classrooms, 2 small teachers' rooms, and a studio for sculptors. The art-smiths' workshop shown on the plan is only one storey high, and is not used by Continuation scholars. This school is neither particularly remarkable nor very modern.

In the northern part of Munich is the large Elisabethplatz School, built in 1900-2 by Professor Theodor Fischer, at a cost of £35,000. It was originally destined solely for the purposes of an Elementary School, but in 1905 it was decided to adapt a part of it for Continuation classes. The latter use portions of the lower three floors, the two top floors being occupied solely by Elementary scholars. The following trades are taught here: coppersmiths, engineers, mechanics, locksmiths, joiners, tailors, and furriers. Workshops for the metal trades and joiners are provided in the basement, but they are shared with the eighth year manual classes of the Elementary School, and are low, dark, and ill-ventilated. The gymnasium is also used jointly. This building cannot be regarded as anything but a makeshift.

In the Westenriederstrasse, situated near the commercial centre of the city, is another block of school buildings where several Continuation classes are quartered, built in 1900-1 from the designs of the City Architect, Herr Rehnen. The rooms are grouped round the four sides of a courtyard, with an internal corridor. Two sides are occupied by the Trade Continuation School, the remaining two by a Commercial School. There are two distinct entrances, but the heating apparatus is arranged for the whole block. In the Continuation School are held classes for the decorating and glazing trades only; but of 700 odd scholars using the rooms only about half are Continuation scholars, the remainder being more advanced students. Though rather dark and shabby, both inside and outside, the school is admirably equipped and has a fine entrance vestibule.

The fourth Munich example is at the Gotzingerplatz School in the southern quarters of the city, designed by Baurat Grässel and opened in 1906. This is a very large Elementary School in which 3 classrooms and 2 workshops are provided for the sole use of the Continuation scholars.

In Düsseldorf, where Trade classes will eventually be concentrated in two large central schools (see p. 466), Continuation scholars have been allotted a section of a modern Elementary school and a new Realschule respectively. The former is situated in the Färberstrasse, and is only two or three years old. The trades taught here are smiths, moulders, pattern-makers, founders, tinsmiths, dental mechanics, electricians, gas-fitters, plumbers, and gardeners. Most of the teaching is theoretical, but workshops for the metal-trades are provided in the basement and are used jointly with the eighth year manual classes. Ingenious contrivances have had to be invented to counteract the difference in height between boys of 13 and 18 who may have to use the same work-benches.

At the new Realschule in Ellerstrasse a wing is set apart for Trade Continuation scholars, and here are taught the cooks, bakers, confectioners, butchers, and waiters.

Last among the Trade Continuation Schools visited on my tour must be mentioned the huge Kurfürst Friedrichschule at Mannheim, a large and thriving city on the Rhine with a population of 220,000. This was designed by the City Architect and erected in 1904-6 at a cost of £75,000. The buildings are grouped round a quadrangle, the four sides being approximately divided into an Elementary School, a Commercial School, a Trade School, and accommodation for 4 caretakers (the latter portion being only half the height of the remainder). In the Trade and Commercial sections a large number of Continuation scholars are educated.

From the examples cited and described above, it will be seen that the Trade Continuation School building in Germany is still in a state of development, and that it will not be for many years that every town has its Continuation scholars separated from other students studying similar subjects in a different way. But that is the end towards which the present lines of development are pointing.

V.

THE DETAILS OF TRADE CONTINUATION SCHOOL BUILDINGS.

So far I have only dealt generally with the accommodation required in a modern German Trade Continuation School, and from the various plans illustrated one may learn how that accommodation has been provided. It is now necessary to enter into further detail as to the various rooms and their design as affected by their peculiar uses, and also to consider such aspects of the problem as sanitation, etc. These questions may be grouped under the following heads: (a) Rooms used for teaching; (b) Other rooms; (c) Cloakrooms, sanitation, and minor features.

(a) ROOMS USED FOR TEACHING.

Classrooms.—An ordinary classroom in a Continuation School need only differ from an ordinary Elementary classroom in the matter of size, the average age of the Continuation scholar being 15-16, of the Elementary scholar 10. After comparing a long series of measurements taken in German Continuation Schools, I am unable to give any accurate figures, so great is the diversity. But the average sizes appear to be:—for 30 scholars, 28 feet by 21 feet; for 35 scholars, 29 feet 6 inches by 23 feet; for 40 scholars, 36 feet by 23 feet. The usual number of scholars per classroom is 30 or 35. The size of desk used is even more fluctuating, dual or triple desks being the favourite patterns.

Drawing-classrooms are larger than the ordinary type, a common size being 36-40 feet by 23 feet. The usual size of drawing-desk allows 3 feet 6 inches by 2 feet 1 inch of desk-space per head. Some authorities consider that all ordinary classrooms in Continuation Schools should be designed as drawing-classrooms.

Many classrooms have a dado of linoleum with a wood fillet above. Glazed brick dadoes do not seem to have yet made their appearance in these schools. The floors are almost always covered with linoleum, even when wood-block flooring is laid underneath. The space allowed for the teacher in ordinary classrooms averages about 6 feet wide. In one case, at Karlsruhe, a new type of rostrum is to be seen, constructed of hollow brickwork instead of the usual timber framing. The height of classrooms approximates to English practice, and is usually between 12 feet and 13 feet. The proportion of window-area to floor-area varies from $\frac{1}{4}$ to $\frac{1}{6}$. The air-space and floor-space per scholar is also very variable. In one typical school visited the figures were 260 cubic feet and 20 square feet respectively. In some of the newer schools the windows extend to the full height of the room, but this is by no means universal. Double windows are largely used. At least one blackboard is found in every classroom, usually in two sections to slide, less frequently to fold. One authority advances the theory that for Continuation scholars it is advisable to provide separate chairs, which promote a feeling of independence. It is said that a boy of 17 does not like to sit on a bench. In two schools visited chairs were found with dwarf backs only 6 inches above the seat. Occasionally ordinary classrooms are equipped for lantern-lectures, but usually these take place in the science-room (see next paragraph). The huge school at Vienna has provision made for lectures in every classroom. At Aussig the drawing-class-room for shipbuilders has drawing tables 9 feet 1 inch by 2 feet 2 inches, supported on stiff trestles, and has also a prepared floor in another room on which full sizes of details may be worked. In the former room is a very large special blackboard, measuring 16 feet 3 inches across its two widths.

The storage of drawing-boards has to be seriously considered in Continuation schools. Sometimes, as at Bonn, a large alcove is devoted to this object. More usually recesses are contrived between the flues in classroom walls, as at Stuttgart, or cupboards are fixed. The size allowed for each board appears to be 26 inches by 21 inches. The normal plan is to provide every scholar with a separate key, but the teacher generally has a master-key. In one case the lockers were unlocked in groups by the teacher's key only. In some schools cupboards are also provided for T-squares, &c.

Most classrooms are fitted with a hand-basin or sink, varying in size from a very small white-glazed

basin to a large sink set in a recess and surmounted by an arch of glazed tiling. This practice must involve a great many concealed drains in the walls. (See also paragraphs on "Cloakrooms" and "Teachers' Rooms.")

Science Classrooms.—Almost every German Continuation School has at least one room for teaching chemistry and physics. In a Commercial School the teaching is not specialised, and in certain cases already quoted the only scholars using the room are chemists who are grouped with the Commercial section. In the Trade Schools, however, science is applied to all branches of industry and there is often a suite of lecture-rooms and laboratories for the teaching of chemistry, physics, and electricity. The number of the rooms varies with the size of the school.

In general arrangement there is little difference between these and similar rooms in our English Secondary or Technical Schools. The lecture-room floor is usually stepped in the familiar "theatre" form, the tiers being of wood and the gangways being covered with tiles or linoleum. At Aussig the floor is of deal boarding laid sloping.

The room is almost invariably fitted with a lantern of the latest type, and the windows are darkened by curtains of black stuff in grooves, operated by a handle controlling two windows at once. At least one room for preparing experiments is required, and is best placed adjoining the lecture-room, and connected with it by means of a fume-cupboard in the form of a serving-hatch, behind the demonstration-table. The shelf of the fume-cupboard and the top of the demonstration-table may be covered with white glazed tiles. The demonstration-table must be fitted with water, gas, and electricity. A blackboard is also required in this room, and a lantern-screen to drop from above it.

In the larger schools are separate laboratories for chemistry, physics, etc., but the lecture-room is often used in common. Besides the preparation-room above mentioned it is desirable to have a room for apparatus (generally known in England as a "balance-room"). Occasionally this is combined with the study for the science-teacher.

In a school at Düsseldorf is a science-room with desks or benches adaptable either for writing notes at lectures or for making practical experiments.

Among the buildings described in this book that at Vienna has by far the most elaborately equipped rooms for science teaching. The tables in the laboratories (see fig. 34) resemble surgical operating-tables in appearance, being constructed of light tubing enamelled white, with tops covered with white glazed tiling. The demonstration-table has a plate-glass top on a white ground. The seats in the chemical laboratory are very small stools constructed of metal tubing enamelled white, with circular deal tops also enamelled white.

Trade Workshops or Workrooms.—These rooms occur only in Continuation Schools where trade teaching is practical. Theoretical trade teaching is carried on in ordinary classrooms or in drawing-classrooms according to the nature of the trade. The workshops for practical work do not differ in any marked degree from those in English technical schools where the education is voluntary. But it must be remembered that there are also voluntary technical schools in Germany, where fees are paid, in addition to the Trade Continuation schools now under consideration. The essential point is to describe the minimum requirements of a workshop in a Continuation School, where economy is always an important factor.

At Strassburg the only workshop provided is for the printing-trades, but in most towns where a small school is established the first two workrooms required are for the wood-trades and the metal-trades respectively. In the first can be taught, by a little contriving, carpenters, joiners, furniture-makers, wheelwrights, carriage-builders, etc. ; in the second, moulders, mechanics, smiths, engineers, coppersmiths, grinders, tinsmiths, etc. Almost equally necessary is a large and well-lit studio or workroom for decorators, painters, upholsterers, etc. This is most conveniently placed on an upper floor, often in the roof. In most towns a room is provided for the trades that the Germans call "fine mechanics"—e.g., watchmakers, dental mechanics, jewellers, opticians, goldsmiths, cycle and motor

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engineers. Next in importance is the workshop for "installations" (gas, water, and hot-water fitting, plumbing, and electric wiring), and another for sculptors, modellers, and plasterers. In large schools one sometimes finds a room where bricklaying is taught. If more than one Trade Continuation School is provided in each town (and this appears to be desirable in all towns with a population of over 200,000) it is advisable to reserve rooms in *each* centre for the joiners and the mechanics, and to place the remaining trades in one centre *only* as is found convenient. This is the principle adopted at Munich. Another possible subdivision is to have one school for the building trades, another for the engineering trades, a third for the printing and kindred trades, and a fourth for all the remainder. At Düsseldorf there is a triple division into "heavy" trades (see p. 467), "light" or manual trades (p. 514), and the trades connected with the preparation and serving of food.

The equipment and design of typical engineering workshops may be seen from the illustrations accompanying this Report. Those at Aussig are remarkably complete, those at Vienna are magnificent, but are far too elaborate for any save a city of the first rank, and of those described here the most useful are the examples at Munich, which are on a reasonable scale for an ordinary large town. The floors are frequently paved with pine blocks, as used for street-paving. The advantage of placing engineering workshops in a separate wing or detached building, or in the courtyard of a higher building as at Vienna, is that additional height and toplight may be obtained thereby. In three respects these workshops appeared to me to be superior to the average type as seen in England. The floors are kept absolutely clear of any obstruction, so that they may be thoroughly swept each night. All machinery is protected as far as possible, the belting, etc., being shielded by wire cages, and safety clutches, etc., being installed where practicable. Smoke and other fumes are completely eliminated, the smoke of the smiths' forges being sucked away downwards by an exhaust.

The same features appear in the arrangement of the joiners' workshops, where various devices are used to keep the floors absolutely clean. Timber in actual use is stored in a "cradle" of light steel joists, which is attached to the ceiling. It need hardly be remarked that this presupposes a specially rigid floor above. All tools are hung in vertical cases fixed on the wall or against the pillars supporting the roof. Within a couple of minutes of the electric bell ringing at the close of the "period," every bench is cleared except for shavings, and a few minutes later the cleaners leave the whole workshop speckless.

The room for "installations" is usually well equipped with sanitary appliances, etc., connected to a water supply and in actual working order, besides the benches and apparatus for plumbing work, etc. A short length of 9-inch brick wall is frequently provided in the middle of the floor, 6 feet or 7 feet high, on which electric wiring can be practised.

The studios for painters and decorators are in no way remarkable. In the larger schools a series of cubicles with bare plastered walls is provided, in which practical wall and ceiling decoration may be carried on.

Most schools have a room or rooms for photography in the roof, sometimes connected with the printing department and sometimes adjoining the chemistry-rooms.

At Vienna is a large and well-equipped kitchen or bakery for confectioners with elaborate stoves and a range of electrically-driven machinery. But normally bakers and confectioners, like saddlers, shoemakers, watchmakers, glovemakers, brushmakers, weavers, tailors, and waiters, can be taught all necessary practical work in a room of ordinary shape and design, no machinery or heavy plant being required. In the case of various minor trades (coachmen, chimney sweeps, etc.) the vocational teaching, though applied to the scholar's particular craft in the most ingenious way, is bound to be theoretical and may be given in any ordinary classroom with cupboards and shelves for the necessary equipment.

In Munich gardeners receive practical tuition at an open-air school, and butchers in one of the municipal abattoirs.

With regard to the equipment of these numerous trade workshops and classrooms, a word of explanation is necessary. In any good German or Austrian Trade Continuation School the number of valuable models and specimens is really marvellous. To take an instance within the writer's own knowledge, one may cite timber as used by the joiners and the wood-working trades. The collection of timber specimens in either of the two principal schools in Munich would do credit to a good museum in a large town. Everything connected with every trade seems to be represented, and nothing is dusty or out-of-date. The same applies to all branches of the metal trades. Similarly, in the painters' and decorators' rooms, besides the usual casts and models, there are stuffed birds in natural surroundings, and even fresh flowers (supplied daily from the municipal gardens). But it would need an



FIG. 37. COMMERCIAL CONTINUATION SCHOOL, ELBERFELD: TEACHERS' COMMON ROOM.

educational expert to praise these exhibits as they ought to be praised. It is enough to say that here German thoroughness is seen at its best. The models in the chimney-sweeps' classroom at Munich alone explain the whole system.

These numerous exhibits are very largely the gift of local manufacturers, who see that their share in any advantage to be gained from a Trade Continuation School depends partly on keeping the scholars thoroughly informed as to local conditions and industries. Hence, in considering the figures for "equipment" quoted on various occasions during this Report one must remember that an enormous amount of valuable specimens and models (including often the cases in which they are housed) has cost the School authorities nothing.

But workshop-training, as I have already said, is still on its trial in the Continuation School, and it remains to be seen whether it will become the rule throughout Germany and Austria within the next

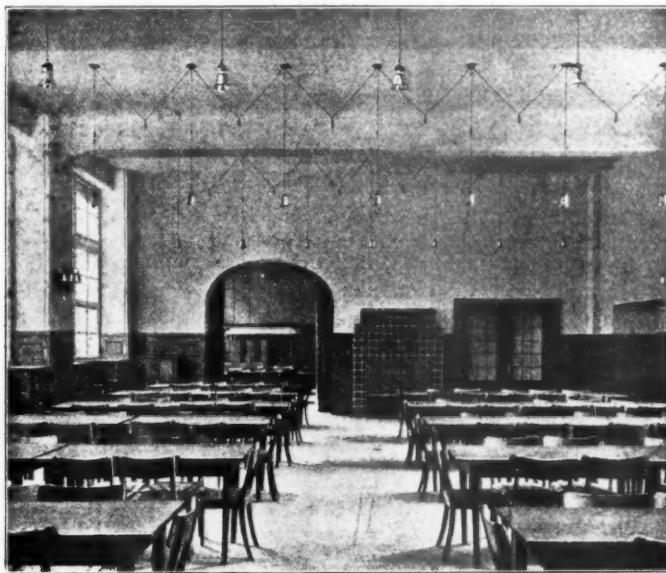


FIG. 38. CENTRAL CONTINUATION SCHOOL, FRANKFORT-ON-MAINE:
ROOM FOR READING AND GAMES.



FIG. 39. CENTRAL CONTINUATION SCHOOL, FRANKFORT-ON-MAINE:
CORRIDOR ON TOP FLOOR.

decade. At present there is a strong tendency in its favour. This decision will, of course, affect the planning of all Trade Continuation Schools fundamentally.

(b) OTHER ROOMS.

Administrative Rooms.—Every school has a study or office for the Director, as the headmaster is called, and connected with it a room for clerks, varying in size according to the number employed. In small schools visitors take a chair in the latter room, but in all large new schools a visitors' waiting-room is provided. Very often there is another small room for private interviews with parents, &c.

A large room, the "Conference Room," is required for the periodical meetings of teachers, and has either a very long table or an L-shaped table in the centre. As a rule this room is also used as a Teachers' Common Room, and sometimes contains the teachers' library in bookshelves round the walls (see Fig. 37). It must be conveniently placed, well furnished, and well lit. Very often it occupies the place of honour over the main entrance. On the table are displayed, as a rule, a large number of current periodicals. The teachers' hats and coats are kept in this room, either in closed lockers or on hooks, and there is always a hand-basin, usually several. The same applies to the Director's room and the clerks' office.

In large schools there is a Teachers' Library in a separate room, containing books of a scholastic and technical character.

Besides the Common Room, which is not quite universal, there should be studies for all the principal teachers, connected with their classrooms or departments. These small rooms in some cases—*e.g.*, at Munich—take the place of a Common Room and seem to be used for different purposes in every school. In most schools in Munich such a room is used by one teacher only, and occasionally by three or four elsewhere. But collections of models, etc., are kept in these rooms, also drawing boards in exceptional instances, and, unless I was misinformed by an architect, the long range of studies between the north classrooms at Karlsruhe (Fig. 28) are to be used also by pupils for making notes and for consulting books.

Residential Accommodation.—Rooms are usually provided for at least one caretaker on the premises either on the basement or ground floor, or in a small detached lodge, as at Gelsenkirchen. At Karlsruhe is a house in the courtyard for two caretakers, and at Mannheim a house for four caretakers, the Mannheim school being a large composite institution.

In many of the new schools accommodation for the Director is also provided, varying from a small flat in the main block to a substantial villa in the grounds, as at Aussig and Dortmund. In the latter case a little stone bridge connects the Director's room on the second floor of the school with the staircase of his house. At two schools in Frankfort the Director occupies the upper floor of a house, and the caretaker the ground floor or semi-basement.

Rooms for Assemblies and Exhibitions.—It is usual to provide one large hall, for lectures and for public gatherings, in a Continuation School of any type. This may be contrived in a variety of ways. At Bonn there is a lecture-room to seat 300, a gymnasium, and a recreation-room. None of these is, strictly speaking, an assembly hall, yet any one of them would serve the purpose. In the cases where there is a single hall for all public functions and for general gatherings of the scholars, a separate entrance, exits, cloakrooms, and lavatories are provided. The accommodation of these halls is usually small in comparison with the number of the scholars in the school. Frequently provision is made for lantern lectures.

In every Trade School, but not necessarily in a Commercial School, it is usual to provide facilities for exhibitions. These may take two forms. For the guidance of scholars in various trades, models and specimens must be displayed permanently in some convenient position and carefully classified. Provision must therefore be made for glass cases arranged in rows. At Karlsruhe, Stuttgart, and Bruchsal—three schools of very different sizes—cases are arranged in a wide corridor with a side light.

At Stuttgart the result has been achieved with a distinct gain in architectural effect (see Fig. 23). At Karlsruhe another room is provided to house exhibitions for the guidance of teachers. Then space must also be provided for the periodical display of scholars' work. Very often workrooms are utilised, but at Dortmund and elsewhere a large room is set apart for the purpose.

Recreation Rooms.—The last, and in many ways the most striking, group of rooms in a modern German Continuation School is the suite of Recreation Rooms. In some new schools—*e.g.*, Chemnitz and Aussig—and in many old ones these amenities do not exist, but it is now usual to provide accommodation for the "Scholars' Association" (*Lehrlingshort* or *Jugendfürsorge*), which meets, as a rule, every evening in the week and on Sunday afternoon. At least one large room is commonly found for general gatherings, and frequently it also serves as an assembly-hall or as a lecture-room. At Vienna is not only the usual excellent lantern, but also a cinematograph apparatus in the approved type of fireproof room. In these rooms are given lectures on subjects outside the school curriculum, and concerts and dances are also held. How the latter are organised and regulated I am unable to say, but a member of the staff is in attendance at all gatherings to ensure a reasonable measure of discipline. In connection with the large room, known by a variety of names—*Spielsaal*, *Festsaal*, &c.—is a small kitchen where light refreshments may be prepared—in some cases by the scholars, in other cases by the school servants. Besides the elaborate suite at Vienna, there are excellently equipped recreation rooms in the two schools at Frankfort and in that at Bonn, already described. In the Frankfort and Bonn schools a small room adjoins the large one, intended for reading and for table games.

In many schools other branches of recreation are organised, such as excursions and picnics in the summer. A school Savings-Bank is a usual feature.

The Scholars' Library is generally for recreative reading rather than for purposes of study, but often combines the two in its scope.

All these rooms are attractively furnished and decorated, even in a school which is otherwise severely plain, and the walls are frequently panelled.

Most of the schools have playgrounds and some have gymnasiums, either for the sole use of Continuation Scholars or for use jointly with an Elementary School. Physical drill of various sorts is practised. In some cases gymnastic apparatus is fixed in the playground.

(c) CLOAKROOMS, SANITATION, AND MINOR FEATURES.

Cloakrooms.—There does not seem to be any general rule in Germany as to the design of cloakrooms, which have now attained some measure of uniformity in this country. Out of some thirty schools visited only two had any special rooms for the purpose—*e.g.*, the Trade School at Frankfort, where are deep alcoves closed by folding iron gates, and the Trade Continuation School at Aussig, where are several rooms with ordinary doors. The latter has screens formed of wire netting to prevent the garments coming in contact with one another. In most of the old schools one still finds the antiquated system by which cloaks are hung on hooks fixed to a dado-rail round the classrooms. Three methods are frequently practised besides the last-named. The most popular consists of a range of metal cupboards (about 5 feet high with a sloping top, $10\frac{1}{2}$ inches to $11\frac{3}{4}$ inches wide centre to centre, 12 inches to $13\frac{1}{2}$ inches deep front to back, and fixed about 6 inches off the floor so that the space beneath may be swept), in the corridors, the fronts being either solid or of wire netting for ventilation. The keys are usually kept by the scholars, less frequently by the staff. This system may be seen at Vienna and at Düsseldorf. The second system consists of cupboards in the thickness of the inner wall of the classroom, with doors opening into the classroom itself, and ventilation either into the corridor (as at Karlsruhe) or into air trunks (as at Stuttgart). The third method consists simply of rows of iron hooks in the corridors, frequently in recesses, without any cover or protection against theft (as at Bonn,

Frankfort, Munich, &c.). In this case pans and clips for umbrellas are provided below the cloak-hooks. It will be noticed that these three methods are all used in modern school buildings.

Cycle Accommodation.—Proper cycle-rooms are provided in all the new schools, usually in the basement, occasionally at ground-floor level in the playground. At Stuttgart and Chemnitz these rooms are entered by a door beneath the double flight of main entrance steps, and at the latter school a sloping way is provided at the side of the steps down to the cycle-room. The cycle-room at Bonn measures 46 feet by 14 feet, but this is exceptionally large.

Punishment Cells.—These quaint survivals still appear in many modern schools. They are small rooms painted grey or black internally, with a window high up and a penitential seat. It is admitted that they are seldom used.

Sanitation.—Mention has already been made of the hand-basin or sink in practically every room. Large sinks are also found in Trade Continuation Schools usually in a corridor or recess, where drawing-boards may be washed and paper "strained" and mounted on them. Another feature usually seen in every corridor is a drinking-fountain, varying from the bare minimum with a tin mug to an artistic structure of daintily coloured tiling or faience, with plated taps throwing an upward jet of water. In all the new schools the drinking-fountain has been considered as a part of the decoration of the corridor.

Baths are frequently installed in the new schools, excellent examples being found at Karlsruhe and Vienna. Their use is not, as a rule, compulsory. They are invariably placed in the basement. In all other details of sanitation we have nothing to learn from Germany, though the lavatories and conveniences in the new schools are excellently arranged.

Heating and Ventilation.—The time at my disposal did not admit of an exhaustive study of this branch of the subject, but the same system was used in all the modern schools with slight modifications. Fresh air was introduced at ground-floor level, usually through windows, in one case through glass louvres (hinged), and at Karlsruhe (pp. 497-98) through an ornamental *tempietto* in the courtyard. The air is then passed through screens for filtration purposes, heated, and taken up in an elaborate system of flues and ducts in floors and walls to all parts of the building. An expensive plant is, of course, required as well as a good deal of labour, and planning becomes more complicated throughout by reason of the great number of flues to be contended with. Moreover, the thickness of walls, and usually of floors also, tends to be much increased in spite of considerable ingenuity displayed in utilising recesses between the flues for cloaks, cupboards, etc.

Lighting.—In all the modern schools visited the lighting was exceedingly well arranged. Practically all electric light in classrooms is diffused, but in certain workrooms powerful arc-lights are fixed, and in the workrooms for watchmakers, etc., small lamps of high candle-power are used.

Construction.—The construction of the modern German Continuation School presents no special features differentiating it from other schools in Germany or in England. Reinforced concrete is gradually coming into use, but not in any remarkable form.

Decoration.—The decoration of nearly all the schools visited was of a high order. In this respect German architects are far ahead of their English contemporaries. Curiously enough, this excellence is usually confined to internal features, and seldom appears on the exterior. The German designer has a singular faculty for producing delicate stencilled patterns on wall-surfaces with the simplest elements and at the minimum of expense. He understands the use of colour, and often contrives a colour-scheme of surprising charm in a utilitarian corridor devoid of architectural features. Many of the most attractive rooms seen by the writer were decorated by students of the evening Trade classes, who are, of course, more advanced than the Continuation scholars. To this skill in mural decoration must be added an equal skill in the choice of glazed tiles, faience, etc. It is a pleasure to turn from the everlasting brown glazed bricks of the L.C.C. to the delicate tints of the German artists, and one seldom emerges from one of these new schools without a feeling of æsthetic satisfaction. German

originality is also displayed in the decorative treatment of walls and other features where a rough surface is intentionally produced. Sometimes this roughness is caused by omitting a floating coat of plaster over the concrete of stair-risers and landings, beams, etc. At other times a form of plaster is used which can be worked with mason's drags, etc., and gives the exact effect of coarse sandstone. These methods may be studied in the school buildings at Dortmund and Karlsruhe respectively. Colour is often applied to those rough surfaces, strong colours, such as dark blue, being used with a boldness well suited to the coarse texture of the material.

VI.

THE PLANNING OF COMMERCIAL CONTINUATION SCHOOL BUILDINGS.

It need hardly be said that a Commercial Continuation School requires little of the special accommodation inevitable in a Trade Continuation School. Indeed, what has been said already of such schools as those at Bonn and Frankfort applies with almost equal force to this more specialised building.

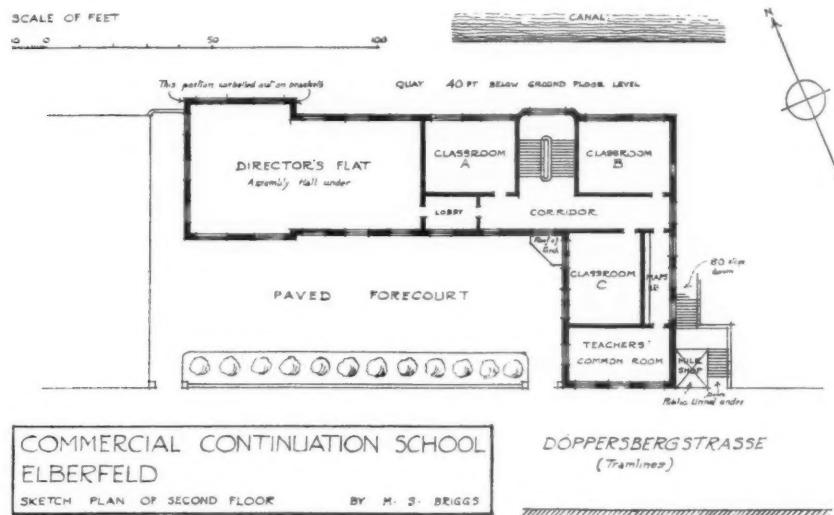


FIG. 40

The Commercial Continuation School at Cologne (an old building remodelled) has already been described, and a more modern example may be seen at Elberfeld. (See Figs. 37, 40.) Erected in 1912 at a cost of £25,000 (including equipment) from the designs of the City Architect, Herr Schönfelder, this large building stands on one of the sharply sloping sites so common in this city. There are some 1,300 names on the books at the present time, but of these only about 650 boys and 180 girls are Compulsory Continuation scholars, the remainder being voluntary students. The school is, in fact, a Commercial School rather than a Commercial Continuation School—*i.e.*, the latter rôle is considered to be of secondary importance. The main school building is erected on a substructure level with the ground at the entrance, but rising some 40 ft. above the canal quay on the north. This substructure is let for warehouses, etc., and only the heating apparatus, etc., of the school is placed below ground-floor level. The plan shows the general disposition of the rooms, which are as follows :—

Ground Floor: large assembly hall, a Director's room with office adjoining (under "Caretaker B" on plan), apartments for the caretaker and lavatories in the south wing, and a small dark-room.

First Floor: 3 classrooms (as on the floor above, see plan), Library (under Teachers' Common Room), and a residential flat corresponding to that on the floor above, as shown on the plan. (For second floor see plan.)

Third Floor (partly in the roof): 2 classrooms (over "A and B" on plan), a science lecture room over "Classroom C," with preparation room and specimen room over "Teachers' Common Room" and "Maps."

Fourth Floor (in the roof over central portion): 1 small classroom, a large room for typewriting, and some lumber rooms. On the east of the school and adjoining the Döppersbergstrasse is a small milk-shop, the substructure being utilised for a public convenience entered from the first landing on the steps down to the canal.

The external walls are finished in rough-cast, the dressings are of red sandstone, and the roof is covered with red tiles.

The assembly hall on the ground floor provides seats for 170 persons at lecture desks. When used for social gatherings without desks 300 persons can be accommodated. There is a lantern, a blackboard, and black curtains for darkening the room during lectures in the daytime. In the floor of the rostrum is a flush metal fillet, which is really the edge of a rolled lantern screen, and can be pulled up by a ring. This screen displays pictures reflected through it from a lantern *behind it* in the preparation room adjoining. There is also an aluminium screen for use in the ordinary way. A fume-closet in the form of a serving hatch is placed in the wall between the assembly hall and the preparation room.

The accommodation for two Directors is remarkable, the more so when one learns that one of them is not a member of the staff of this school, but is connected with the Lyceum (another quite separate school) across the road. This is only another instance of the constant overlapping and interdependence of the German educational system.

One of the most interesting rooms is the small Library of Maps in the corridor leading to the Teachers' Common Room (see plan). The fine collection of maps is stored in cupboards with revolving-shutter fronts, each map being on a roller and fitted in its own division. Each of the four cupboards is about 6 feet 6 inches wide, and the maps are classified in countries, continents, etc.

The small dark room is for the use of the science teacher only, not for the scholars.

Taken as a whole, this building is an excellent example of a modern Commercial School, but is perhaps too expensively fitted to form an ideal model for a Commercial Continuation School. The essential requirements of either include the usual classrooms and administrative suite, also science rooms, a large and well-lit room for typewriters, a classroom for bookkeeping, with specially wide desks for ledgers, a library, and storage for maps and diagrams.

CONCLUSION.

The purpose of this Report is to describe the type of building now being evolved in Germany and Austria for the remarkable system of Continuation Schools in those countries. It remains to be seen whether England will fulfil the confident expectations of educational prophets by following the German example in a very short time. If that happens, the question of buildings will immediately come under discussion, and English architects will naturally turn to Germany for the results of her experience, just as educationists have been for years studying the benefits of her Continuation School system to industry, commerce, and national efficiency.

* * * A small handbook on German and Austrian Continuation Schools by the author of this Report will be published shortly by the Board of Education.

REVIEWS.

LITHOGRAPHY.

Lithography and Lithographers. By Joseph Pennell and E. Robinson Pennell. (The Graphic Arts Series.) 4o. Lond. 1915. 10s. 6d. net. [T. Fisher Unwin, 1 Adelphi Terrace.]

The posters of the underground railways and the exhibition in the new galleries at the British Museum of the work of some modern lithographers have done much to familiarise Londoners with the later developments of the revival of the art of lithography. This book, written by Mr. and Mrs. Joseph Pennell, comes opportunely to supplement the interest thus created.

The art of lithography is comparatively a modern one. It was invented by Alois Senefelder in 1798, and the story of his difficulties and triumphs as told by Mrs. Pennell is an arresting and fascinating one. There have been many attempts to deprive Senefelder of the credit due to him, but modern opinion is agreed that he was the discoverer of the process of reproduction known as lithography, and that later lithographers have simply followed his lead. His *Complete Course of Lithography*, published in 1818, is still consulted and used by present-day workers.

But though lithography was invented by a German, it was in France that its artistic possibilities were most clearly perceived. By the year 1816 lithography had become a fashionable craze in Paris. Lithographic stones and chalks were produced in the salons, while great ladies like Madame Récamier and the Duchesse de Berri, and artists, among whom were Horace Vernet and Isabey, worked at the new art with enthusiasm. In England it was slow in gaining ground, though Prout, Harding, and Bonington were working for the French publishers, notably for Baron Taylor; and it was not until the years 1837 to 1860 that English lithography attained its zenith.

To architects the period is interesting, because in almost all the architectural publications of the time lithography was the method of reproduction. The illustrations were lithographs. Early publications such as those of Greek and Roman antiquities relied on the steel engraver, but this so-called Romantic period of the early Victorian days found lithography more suited to its taste.

In our own library at the Institute these early lithographers are well represented, and modern draughtsmen might turn to their folios with interest and advantage. Prout's two books, *Sketches in France, Switzerland, and Italy* and *Sketches in Flanders and Germany*, published in 1839, are here. Prout could draw, but his weakness lies in the monotony and unvarying quality of his line. The marble of Verona and the stone of Rouen are alike to him, and one notices with a slight sense of shock that the same peasants inhabit Godesberg and Venice. D. Roberts, R.A., is responsible for the two ponderous tomes of *The Holy Land*, published in 1842. This has a long introductory sermon on "Israel" by a learned divine, and was actually published at 100 guineas coloured and 50

guineas plain. The drawings are consummately lithographed by Louis Haghe. They are mostly panoramic in character, the architectural work being of little interest, with the exception of some sheets of Baalbec.

Robert's *Sketches in Spain*, published in 1837, are architectural studies drawn with delicacy and decision, and in contrast to some of Prout's wooden figures a little crowd in Seville Cathedral is a positive delight.

J. D. Harding's *Sketches at Home and Abroad* are also in the Library. They prove him to have been one of the ablest of English lithographers. His drawing of the Palladian arcades at Vicenza is very modern in feeling, and might almost have been made by a Tite Prizeman, though I fear that the crowd in the Piazza would be beyond the powers of most architectural draughtsmen. The nervous directness of his drawing of Bergamo is admirable, and is far removed from the crumbly picturesqueness of Prout's line. Harding's Venetian sketches are not very interesting, but a little lithograph of Caub on the Rhine is wholly charming.

G. Vivian, a little-known artist, is represented by *Scenery of Portugal and Spain*, 1839. The drawings are principally landscape, well drawn, and beautifully lithographed by Louis Haghe. Haghe, indeed, seems to have been all that could be desired as a technician, but his original work is less pleasing. His *Picturesque Sketches of Belgium and Germany*, in two volumes, published in 1840 and 1845 respectively, while conscientious in their topographical accuracy, lack individuality, and Haghe is rather inclined to overdo the trick of printing high lights in Chinese white from a second stone.

J. F. Lewis's portfolios of *The Alhambra* and *Sketches of Constantinople* are here. The Alhambra set were lithographed by Harding, Lane, Gauci, and Lewis himself. Those by Harding are much the best.

In 1839 Joseph Nash published *The Mansions of England in the Olden Time*. Mrs. Pennell thinks these drawings scarcely worthy of the praise lavished upon them by contemporaries or by modern collectors. I find them not only excellent examples of lithography, but also undoubtedly fine drawings. Such plates as "The Drawing Room, Boughton Malherbe, Kent," have more than mere technical virtue.

There are other portfolios in the Library of less interest and merit, such as Richardson's *Studies from Old English Mansions*, published in 1844. In later years the purely architectural drawings of Norman Shaw and Nesfield were reproduced by lithography.

To return to the book under review, the story of the commercial degradation of lithography and its recent revival as an art closes the critical and historical portion. The technical pages at the end are written by Mr. Pennell with his usual vivacity and looseness of literary style. His story of the German printer in Berlin, who was so perturbed by Mr. Pennell's directions and instructions that he finally refused to work "while I was about" is good. In happier days one would have liked to have heard the printer's story of Mr. Pennell.

W. H. ANSELL, A.R.E. [A.]



9 CONDUIT STREET, LONDON, W., 16th October 1915.

CHRONICLE.

R.I.B.A. Record of Honour : Seventeenth List.

Killed in Action.

WALCH, JAMES BERNARD MILLARD [Student, 1914], 2nd Lieut., 2nd Queen's Royal West Surrey Regiment. Killed in action in France on 25th September. Aged twenty-three.

"Lieut. Walch died," writes his commanding officer, "after having rendered most excellent and valuable service in pushing forward in the attack with his platoon." He "was killed by a bullet, at about 3.30 p.m., when holding the most forward position reached on 25th September by this battalion in front of and close to Cite St. Elie." Lieut. Walch, who obtained his commission in May last, was educated at Hitchin Grammar School and at Christ's Hospital, was articled to Mr. T. E. Pryce [A.], of 10 Gray's Inn Square, and afterwards worked for him and for Mr. Walter Millard [A.]. In 1912 he entered the office of Messrs. H. V. Ashley [F.] and F. Winton Newman [F.] as assistant, and remained with them until he joined the Artists' Rifles after the outbreak of war. He passed the R.I.B.A. Intermediate Examination in June 1914.

Died on Service.

WHITBREAD, LESLIE GEORGE [Student, 1913], Private, 1st/6th Battalion Manchester Regiment, Territorials. Taken ill near Gallipoli, and died of dysentery on 11th September on his way home. Aged twenty-three.

Mr. Whitbread was articled to Mr. Sydney Moss [A.], and stayed with him afterwards as assistant. Since then he has been assistant to Mr. Arthur Brocklehurst, of Manchester. "A very able man and showed great promise," writes Mr. Moss.

Wounded.

BAILY, BASIL EDGAR [F.], Major, 7th Battalion Sherwood Foresters. Wounded in France, and now in hospital in London. Progressing favourably, but has unfortunately lost his right hand.

Newly enlisted in H.M. Forces.

The following is the Seventeenth List of Members, Licentiates, and Students who have enlisted in the Army or Navy for the period of the War, the total to date being 45 Fellows, 339 Associates, 174 Licentiates, and 216 Students :—

ASSOCIATES.

Barrow, S. E. : Lieut., 5th Bn. King's Own Royal Lancaster Regt.
Hennell, Sidney T. : 20th Bn. The Welsh Regt.
Papworth, A. Wyatt : Artists' Rifles.
Peerless, H. R. : 2nd Lieut., 3rd/8th Sherwood Foresters.
Pritchard, W. : 2nd Lieut., Royal Field Artillery.

LICENTIATES.

Battie, O. Keith : 2nd Lieut., 64th (Highland) Div. Train. A.S.C.
Belcher, Alan L. : 3rd/2nd Div. London, R.E.
Edwards, J. P. : 26th Bn. Royal Fusiliers.
Harbron, Dudley : 2nd Lieut., 3rd/9th Durham Light Infantry.
Peake, Frank : 3rd Bn. H.A.C.
Richley, Norman : 2nd Lieut., 22nd Northumberland Fusiliers.
Rodeck, P. : 2nd London Sanitary Coy., R.A.M.C. (T.).
Sewell, R. V. T. : 2nd Lieut., R.E.
Strong, F. D. : Signal Coy., South African Overseas Exp. Force.

STUDENTS.

Bowes, Trevor S. : 2nd/3rd Monmouthshire Regt
Gaskell, R. R. : 2nd Lieut., R.E.
Skinner, T. A. : 2nd Lieut., 3rd Gloucester Regt.
Weston, Kingsley V. : 2nd Lieut., 4th Bn. West Yorks Regt.

Honours, Promotions, Appointments, &c.

It is announced in a Supplement to the *London Gazette* that the King has been graciously pleased to confer the Military Cross on Lieut. William Harold Hillyer [Student], 3rd London Field Coy., R.E., T.F. (attd. 171st Mining Co.), "For conspicuous gallantry and devotion to duty in mining operations at 'Hill 60' near Ypres, between 2nd and 17th April 1915. The task of completing and charging one of our mines was one of great difficulty and strain. Lieut. Hillyer worked and watched long hours at the end of a gallery 165 feet long and 3 feet by 2 feet 3 inches in size, knowing that the enemy was countermanning close by. His pluck and endurance were remarkable, and resulted in the successful explosion of the mine and consequent capture of the hill." Lieut. Hillyer, who was wounded at Festubert on the 12th May, was mentioned in Sir John French's dispatch of the 31st May for gallant and distinguished service in the field, and has since been promoted Captain.

LIEUT. GEOFFREY WM. RIDLEY [A.], of the 4th Royal Sussex Regiment, has quite recovered from wounds received at Gallipoli, and has been promoted Captain, the promotion dating back from the 9th August. His brother, Captain Basil White Ridley [Student], wounded in Flanders on the 3rd September, is making a good recovery, his wounds being almost healed.

MR. H. P. G. MAULE [F.], formerly Company Sergeant-Major of the H.A.C., has been given a commission and the post of Camp Commandant.

MR. H. S. JARDINE [A.], late of the 1st Battalion London Scottish, has been gazetted 2nd Lieut., 3rd/1st London Field Company, R.E.

MR. J. W. GILMOUR WILSON [Student], chief assistant to his father Mr. W. B. Wilson [F.], who has been for six years a member of the London Scottish, has just received a commission as 2nd Lieutenant in the Mechanical Transport Division of the Army Service Corps.

Capt. Douglas Carmichael ; Capt. Bernard Holloway.

The sympathies of architects will go out to Mr. James Carmichael, the well-known London builder, in the loss he has sustained by the death of his gallant young son, Captain Douglas Carmichael, who fell in the recent fighting in France. Captain Carmichael was only twenty-one years of age, and one of the youngest of his rank in the Army. He was educated at Leys School and Jesus College, Cambridge, and passed out of the University with honours. He had just entered his father's business at Trinity Road, Wandsworth, when the War broke out. He obtained a commission as Second Lieutenant in September of last year, was promoted First Lieutenant in

the following month, and Captain in March last, being placed in charge of the Machine Gun Section. His commanding officer, Colonel W. Villiers Stuart, in a letter to Mr. Carmichael pays striking tribute to the young officer's bravery. "He fought that day (he says) with infinite courage—I have no words, and no one else could have any, to express his magnificent bravery. I shall never see a soldier like him again; it is quite impossible that anyone so fearless could ever be found. He carried four lines of trenches with his company under a most desperate artillery and machine-gun fire, and when masses of Germans came against him, by his wonderful personality he kept his men, now reduced to a handful, in good spirits and led them again and again to the attack. They say it was glorious to see him throw himself on the packed masses of Germans and almost alone force them back. He rallied the men over and over again, and they stuck till the end. He was wounded early in the day, about 5 a.m., but, just like him, made nothing of it. He was killed instantaneously by a bullet in the forehead as he was once more leading a bomb charge. I asked for a D.S.O. for Douglas before, and I hoped every day it would come for him. Now I have asked for the V.C. for you, for he would have earned it ten times had he lived. It is heartrendingly sad that he had to go." Mr. Carmichael has also received a letter from Sergeant W. Walker, Machine Gun Section, who writes: "Captain Carmichael was in command of the attack on the morning of the 25th, and right well did he lead us until he was hit in the leg. Then we pushed forward alone, as he refused to have any assistance; but just after I saw him hopping on one leg towards the next line of German trenches under a murderous fire. We took three lines in all, but had to retire owing to lack of bombs and reinforcements. Your son was still in command, absolutely refusing to be taken back. On reaching the original German front line, he rallied the small handful of men left and told us to hold it at all costs, which we did against masses of Germans until almost every man was either killed or wounded. Your son was killed with a machine gun, and I was twice wounded at the same time. It was instantaneous, and his last words were, 'For God's sake, boys, hold them back.' He earned the V.C. fifty times over."

Members will also regret to learn that a similar bereavement has befallen another well-known London builder, Mr. Henry Holloway, of the firm of Messrs. Holloway Brothers, whose son, Captain Bernard Henry Holloway, of the Royal Sussex Regiment, was killed in the same action. Captain Holloway, who was twenty-seven years of age, was also educated at Leys School and Jesus College, Cambridge.

The Architects' "Roll of Honour."

The *Architect*, in its issue of the 8th October, published the first instalment of the "Roll of Honour," of the names of architects, architects' assistants, teachers, and students who have joined His Majesty's Forces for the period of the War, together with the units to which they are attached. The list is based on that prepared at the R.I.B.A.; it runs well into 1,700 names, and fresh names are being added every day. The names are printed in a good clear letter, in alphabetical order, one line at least being devoted to each name, and the "Roll" is distinguished from the rest of the issue by an ornamental border set round each page. This first batch of names makes four pages and carries the list down to "Haslam, J." The "Roll" will be continued in successive issues of the *Architect* until completed.

Formation of the Civic Arts Association.

A memorandum issued by the promoters of the newly-formed Civic Arts Association gives the follow-

ing description of the aims and objects of the movement:—

"At the present time, when the Empire is organising all its resources, not only to meet the present emergencies, but also to grapple with the serious questions which will arise after the war, it is felt that not only the material power of the nation, but its moral power must be concentrated in order to attain the end in view; and it may not unreasonably be urged that in this great effort the arts also should have their place, for artists feel that the passion and sincerity which they put into the work of their hands can be fruitful, even in war-time. There is no doubt that there will be a general desire to put up permanent memorials commemorating the spirit of self-sacrifice shown by those who have engaged in the war. Towns and villages will be anxious to commemorate those who have gone from them; Universities and Schools will desire to pay homage to their sons; private individuals will wish to record the devotion of their kinsmen; and business firms will desire to honour those who have given up their callings to serve their country. Such memorials should be excellent both in design and workmanship, and some should be within the reach of those who have but small means. It is feared that unless thought is directed to the artistic importance of such a movement, many memorials will be unworthy and trivial in character.

"An Association has been formed whose first business will be to offer prizes for suitable designs and to hold an Exhibition. Committees will be appointed to advise those who wish to put up memorials and to bring them into touch with suitable craftsmen. The Association is further considering a scheme for expressing sympathy with our Allies by gifts which might take the form of works by British craftsmen, suitable for presentation to ecclesiastical or civil authorities in the ruined districts. Support is invited which may take the form of donations towards the general fund, or specifically for particular objects of the Association, or of an annual subscription of 5s."

Among those who have already promised their co-operation and support are Sir Edward Poynter, P.R.A., K.C.V.O. [Hon. F.], Sir Aston Webb, K.C.V.O., C.B., R.A. [F.], Sir Wm. Goscombe John, R.A. [Hon. A.], Frank Dicksee, R.A. [Hon. A.], Sir F. Kenyon, K.C.B., Count G. N. Plunkett [Hon. A.], Professor W. R. Lethaby [F.], Halsey Ricardo [F.], Lord Henry Cavendish Bentinck, M.P., Viscount Cobham, Sir Guy F. Laking, Bart., and a large number of other influential people. All communications should be addressed to the Secretary, c/o The Hon. Rachel Kay-Shuttleworth, 28 Prince's Gardens, S.W., and cheques should be made payable to the Hon. Treasurer of the Civic Arts Association.

The London Society.

The October number of the *Journal of the London Society* states that the efforts made by the Society to preserve Wren's church of St. Vedast, Foster Lane, have been so far successful that, in the event of the suggested road from Newgate Street to Liverpool Street being found necessary and practicable, it will be possible to form the road without materially interfering with either the use or the appearance of the church. The new building about to be erected on the site of the old Post Office is to be placed farther north than was originally intended, thus leaving a space between it

and the buildings in Cheapside. The result of this will be that the view of the church spire from Newgate Street will be preserved, and the need for the destruction of the church avoided, if at any time the new road becomes necessary. It is interesting to note also that the Corporation of the City of London have reconsidered the question of the traffic requirements at this busy corner, and that St. Martin's-le-Grand is to be widened to 80 feet in lieu of 70 feet as originally proposed, and that the western end of Cheapside is to be widened to 95 feet. This is mainly due to the increased traffic which it is anticipated will result from the construction of the proposed St. Paul's Bridge, should it ever be built. The prime mover in this matter has been Mr. Arthur Crow [F.], and the Council of the London Society have passed a special vote of thanks to him for the time and energy he has devoted to the subject.

The Society propose to give two lectures—one in November, by Sir Laurence Gomme [Hon. A.], on "Open-air Cafés and Places of Amusement"; and another, probably in January, by Mr. Arthur Crow on "The Port of London Improvements." The lectures will be given at 5 o'clock to enable those members who live out of London to get away early. It is hoped these lectures will be sufficiently well attended to encourage the Committee to arrange further meetings.

The Society promise the publication of a series of plans of Historic London showing the various stages of its development from Roman times to the present day. The plans, which have been prepared under the direction of Mr. W. R. Davidge [A.], constitute a most valuable record of the past, and many useful lessons are to be learnt from them.

The Christmas-in-War-Time Sale.

The Professional Classes War Relief Council are organising a Christmas-in-Wartime Sale, the proceeds of which are to be applied for the relief of members of the professional classes who have been hit by the War. The need for relief is very urgent, for the present condition of previously well-to-do professional people is in many cases truly pitiful. It is the more fortunate members of the professional classes whom the Council are relying upon to help their suffering brethren. Without actually giving money, there are few but could give a little of their time and skill to making some article that they know they *can* make, which could be sold for the benefit of those in want. The Professional Classes War Relief Council ask for 10,000 gifts which they could sell at 5s. each in aid of the Fund. The "Gifts Secretary" will supply to those willing to help lists of articles suggested as suitable for the Sale. They include knitted goods, needle-work, handcrafts (jewellery, leather, cretonne, and basket work), games, toys, and wood-work (to include wood-carving, poker-work, &c.), cooking, and sweets of all kinds. Prizes will be given for the best-made articles in the various classes. The prizes will be selected by the winners from the "Exhibition of

Arts and Crafts in War-Time"—a permanent exhibition held daily at 13 and 14 Prince's Gate, S.W., and made up of the works of artists and craftsmen who are suffering through the War. Anyone whose time is too fully occupied to take an active share in the work is earnestly requested to send 5s. with which to purchase a gift to be sold in his name. The following are some of the forms of relief given by the Council:—

Education.—To enable children to be kept at suitable schools (usually by special arrangement as to fees with the schools) so that their education is not interrupted or neglected.

Training.—To train adult daughters of professional men and their younger sisters whose school life is permanently cut short in Domestic Economy, Nursing, Teaching, Secretarial Work, etc. Also to enable male students to continue their professional training.

Maternity Aid.—By maintaining a Nursing Home at 14 Prince's Gate, and in rendering assistance at their own homes for those unable to leave.

Temporary Employment.—For those who will be able to return to their normal work at the end of the war. In many cases the employment is subsidised by the Council.

Arts in Wartime.—Special exhibitions are held in order to sell works of art. Orders are obtained, other employment is found for artists, and often paid for by the Council.

Music in Wartime.—Concerts are arranged in camps and hospitals, in order both to cheer the soldiers and give employment to the musicians. Fees are paid by the Council.

All information about the Sale may be had from "The Gifts Secretary, Professional Classes War Relief Fund, 13 and 14 Prince's Gate, S.W." It is important that the Gifts Secretary be informed early of the kind of gifts it is intended to send, and money subscriptions should be sent at the earliest possible date.

District Surveyors: Interim Appointments.

The Building Acts Committee of the London County Council reported at the Council meeting last Tuesday that they have consented, under section 142 of the London Building Act, 1894, to the appointment of deputy District Surveyors in twenty cases. In order to fill temporary vacancies for District Surveyors they have appointed Mr. A. G. Morrice [A.], District Surveyor for Streatham East, to be interim District Surveyor for Streatham West; Mr. W. R. Davidge [A.], District Surveyor for the district of Lewisham, to be interim District Surveyor for the district of Woolwich; Mr. H. T. Bromley [A.], District Surveyor for Whitechapel, to be interim District Surveyor for Bethnal Green West; and Mr. E. W. Knight, District Surveyor for Bromley, to be interim District Surveyor for Poplar All Saints. Each of the appointments dates from 1st October 1915, and will continue during the pleasure of the Council. The Committee state that they have adopted the course of appointing existing District Surveyors temporarily to these positions as they thought it unwise to recommend the Council to appoint any new District Surveyors during the War.

L.C.C. Regulations as to Reinforced Concrete.

The L.C.C. Building Acts Committee report that the Local Government Board has allowed the Regulations made by the Council on 6th July 1915, under

section 23 of the London County Council (General Powers) Act, 1909, with respect to the construction of buildings wholly or partly of reinforced concrete and with respect to the use and composition of reinforced concrete in such construction. The Board has fixed 1st January 1916 as the date upon which the Regulations shall come into operation.

National Competition, Examinations in Art, &c., 1916.

The Board of Education have issued a circular from Whitehall stating that in view of the urgent need for national economy and other circumstances arising out of the War, the following changes will be made in their arrangements for the National Competition, Examinations in Art, and Awards in Art, 1916:—

1. The Board will not hold a National Competition in 1916.
2. The Board hope to be able to hold the Examinations in Art as usual, and have issued Regulations for 1916 accordingly. They desire, however, to give notice that it may prove necessary at a later date to suspend the Examinations. In that event they will endeavour to give as long notice of the change as possible.

3. The Interim Regulations for Scholarships, Exhibitions, Free Studentships, and other Awards in Art applicable to the year 1914 are provisionally continued in force subject to the following modifications: (a) The Royal Exhibitions, National Scholarships, Free Studentships and Local Scholarships to be awarded in 1916 may be restricted to numbers less than those stated in paragraph 1 of the Regulations. (b) The Board may find it necessary to restrict the number of new Local Exhibitions in Art to be aided under the provisions of Chapter II. of the Regulations. (c) The award of Princess of Wales' Scholarships may be suspended for 1916, or, if continued, will be made on conditions to be announced later. (d) The Board will not hold Short Courses of Instruction in Art at the Royal College of Art in 1916. (e) The Grants in aid of visits to Museums and Centres of Art Instruction will be suspended until further notice.

4. The Board desire to take this opportunity of giving notice that at some future date after the conclusion of the War they propose to hold one further Special Examination for the benefit of candidates who had almost completed the requirements for the Art Class Teacher's Certificate and the Art Master's Certificate when the old Regulations expired. Provision will be made for the re-examination of (a) persons who were examined in 1914 in subjects necessary to complete an Art Class Teacher's Certificate or an Art Master's Certificate, as the case may be, but failed in one or more of those subjects; (b) persons who, having the Art Class Teacher's Certificate, were examined in 1914 in Drawing from the Life or Drawing from the Antique and have obtained, then or previously, at least a Second Class in each of these subjects. The detailed arrangements will be announced in due course, and at least three months' notice will be given of the Special Examination.

The Chadwick Public Lectures.

Among the series of Chadwick Public Lectures in course of delivery this autumn are a Paper by Mr. A. Saxon Snell [F.] on "Emergency Military Hospital Construction," to be read at the R.I.B.A. Galleries, 9 Conduit Street, on the 10th November at 8.15 p.m.; and a Paper by Mr. W. E. Riley [F.] entitled "Some Conclusions on Housing our Workers," to be read at the Royal Sanitary Institute, 90 Buckingham Palace Road, S.W., on the 17th November at 8.15 p.m. Mr. John Slater [F.], Chadwick Trustee, will preside at the former meeting; and Sir William J. Collins, K.C.V.O., Chairman of the Chadwick Trustees, at the latter.

University of London School of Architecture.

The Carpenters' Company Evening Design Class meets on Mondays and Wednesdays at 6.45 during the first and second Terms (October to March). The first meeting was held on Wednesday, October 6th.

Students can take up either: (I.) Special subjects set at the beginning of each Term which include both practical and academic problems. The subjects to be set in October are: (a) A Hostel for Women in London. (b) A Tea Pavilion, courtyard and landing stages on an island in the Upper Thames. The subjects to be set in January will be announced later. Or (II.) The subjects set by the R.I.B.A. as Testimonies of Study for their Final Examination, particulars of which are published in the R.I.B.A. JOURNAL. Students are required to finish their designs, but these need not be submitted until the end of the College Session, about 30th June. Prizes are awarded at the end of the Session. The class is under the direction of Professor F. M. Simpson [F.].

A Travelling Studentship of £25, instituted by the Carpenters' Company, will be awarded at the end of the Session to the best Student possessing sufficient merit in either the Day or Evening Classes. Students of the Design Class, by permission of the Carpenters' Company, can attend the practical demonstrations at the Trades' Technical School, Great Titchfield Street, without further payment. These classes are held on two evenings a week during the Winter and Spring Terms. Students can obtain permission to use books from the Technical Library of the Carpenters' Company and the Departmental Library of the School of Architecture. The Design Class (Professor Leslie Wilkinson, Instructor) is held under a grant from and at the expense of the Carpenters' Company, and is consequently open to the Students at low fees.

For further particulars and for information regarding the Day Courses application should be made to Walter W. Seton, M.A., D.Litt., Secretary, University College, Gower Street, W.C.

Lecture on Santa Sophia, Constantinople.

Professor F. M. Simpson [F.] will deliver a public lecture at University College on "Santa Sophia, Constantinople, and the Mosques of Constantinople and Brusa," at 5.30 p.m. on Thursday, 28th October. Admission to the lecture will be free by ticket, to be obtained from the Secretary of University College on application, enclosing a stamped addressed envelope.

British Museum Precautions.

The Trustees of the British Museum have been in communication with the authorities charged with the oversight of public buildings, and all possible precautions have been taken to subdue the lighting both inside and outside the Museum buildings. Special steps have been taken to safeguard the treasures of the Museum. The Elgin Room, for instance, has been closed to the public, the pedimental sculptures of the

Parthenon having been removed to a strong-room specially constructed in the basement, and the Parthenon Frieze, which is elaborately fixed to the walls, is protected by sandbags and an anti-combustion material. The Portland Vase, the Rosetta Stone, and any other of the more precious contents of the Museum have also been removed to the basement.

Victoria and Albert Museum.

The collection of bronzes by M. Auguste Rodin, presented by the sculptor to the Victoria and Albert Museum, have been returned from Edinburgh, where they were exhibited on loan by the Royal Scottish Academy during the summer, and replaced in the West Hall of the Museum, where they are now on view.

Artists' War Relief Exhibition.

All concerned in the organisation of the Artists' War Relief Exhibition, held at 9 Conduit Street under the auspices of the Imperial Arts League and the R.I.B.A., are to be congratulated upon the result. The accounts are not yet closed, but it is understood that at least £500 has been realised, and this will be a very welcome addition to the funds. Architects and their brother artists, the painters, black-and-white artists and sculptors, have proved that a harmony of intention in agreeing to a joint exhibition can be easily maintained and developed, and it is gratifying to find that this cordial good-fellowship is appreciated by the public, which has been induced to invest so substantial a sum in their work. It is a curious fact that the sales on behalf of the Imperial Arts League amount to about the same sum as that realised for the R.I.B.A. sales. Though the Exhibition was closed on the 2nd October and the sold pictures have been delivered to their new owners, an interesting remnant is left, and these have been hung in the long corridor gallery at No. 9 Conduit Street, where they may still be viewed by the picture-loving or picture-buying public on presentation of a visiting-card at the office of the R.I.B.A.

At a recent meeting of the Council of the Imperial Arts League it was proposed by Mr. David Murray, R.A., and seconded by Mr. C. F. A. Voysey, "That a hearty vote of thanks be given to the President and Council of the Royal Institute of British Architects for the kind loan of their galleries to exhibit pictures acquired by the Imperial Arts League War Emergency Committee in aid of their Fund."

THE EXAMINATIONS.

Discontinuance of the Preliminary.

The Council give notice that the Preliminary Examination of candidates for Registration as Probationers will be held probably for the last time next month. The Regulations which will come into force after its discontinuance will be published as soon as possible.

OBITUARY.

John Tavener Perry, who died on the 23rd September at the age of seventy-five, was for forty years a member of the Institute, having been elected Associate in 1864 and Fellow in 1896. He gave up his membership on retiring from practice some twelve years ago. Born at Chelsea in 1842, he was articled to the late Professor Hayter Lewis in 1859, and attended the Royal Academy Schools. He was awarded the Institute Silver Medal for drawings in 1864, and was the first to hold the Pugin Travelling Studentship on its inception in 1865. He started practice at 9, John Street, Adelphi, in 1864, and was afterwards associated in partnership with his fellow-pupil Frederick Henry Reed [F.]. Among buildings designed and erected by him are the schools and vestry of the Chapel Royal, Savoy; the Alhambra Theatre, Leicester Square; the Hôtel Cecil, Strand, and the Hôtel Métropole, Swansea; Union Assurance Office, Wilhelmstrasse, Berlin; the Lady Altar, Augustinian Convent Chapel, Bruges; North Wing of University College, London; Castlemount, Dover; Kensington Court Mansions; Schoolhouse, Rochester, for the Dean and Chapter, and the restoration of the Refectory, St. Martin's Priory, Dover. Mr. Tavener Perry had travelled a good deal in his time, and was indefatigable with his pencil. Possessed of a polished intellect and a well-stored mind, his labours in the field of architectural literature bear witness to the high quality and versatility of his powers. His published work includes "Chronology of Mediaeval and Renaissance Architecture" (John Murray), "St. Martin's Priory, Dover" (Parker), "Antiquities of Durham" (Parker), "Blethlingly: a Disenfranchised Surrey Village" (Batsford), "Plaxtote" (Batsford), "Dinanderie: Mediaeval Art Work in Copper, Brass, and Bronze" (George Allen), and a large number of essays and articles in the *Burlington Magazine*, the *English Illustrated Magazine*, the *Antiquary*, *Reliquary*, *Reliquary and Illustrated Archaeologist*, and the London architectural journals. He was the first editor (with Mr. E. J. Tarver) of the *A. A. Sketch Book*, and in later years was the editor of "Old Middlesex," contributing himself the chapters on the County of Middlesex, the Story of Chelsea, and the Pilgrimage of the Brent. He was author of the Papers on the Royal Residences in Surrey in Dr. Cox's "Memorials of Old Surrey," and of various Papers for "Memorials of Old London," "Memorials of Old Sussex," "Memorials of Old Kent," and "Memorials of Old Durham." He served for some time on the R.I.B.A. Literature Standing Committee, and contributed several Papers to the *TRANSACTIONS* and *JOURNAL*, including "Mediaeval Antiquities, Durham" [TRANSACTIONS, 1865-66], "The Mediaeval Brickwork of Pomerania" [TRANSACTIONS, 1873-74], "Mediaeval Architecture in Sweden" [TRANSACTIONS, 1890-91], "The Influence of the Hanseatic League on the Architecture of Northern Europe" [JOURNAL, 1893-94], "Damme, a City of the Netherlands" [ib.], "Some Recent Discoveries at Nemi" [JOURNAL, 1895-96], "The Mediaeval Campanili of Rome" [JOURNAL, 1896-97], and minor contributions. He had a wonderful faculty for the delineation of architecture, and though he must have turned out hundreds of drawings in his time, there exist none but seem traced with the greatest pains and care. He was a strenuous worker at all times; as an architect it was his invariable practice to write out his own specifications, to draw all full-sized details, and to make the pen-and-ink sketches with his own hand.

